

David Silverman  
Assistant Regional Counsel  
United States Environmental Protection Agency  
75 Hawthorne Street  
San Francisco, California 94105  
(415) 744-1377

Attorney for EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX

In The Matter Of:

Jasco Chemical Company Superfund Site, #F6  
Mountain View, California

RESPONDENT:

Jasco Chemical Company;  
Harry M. Anthony; and  
Carol Jean Anthony

U.S. EPA Docket  
No.93-02

Proceeding Under Section  
106(a) of the  
Comprehensive Environmental Response,  
Compensation, and Liability Act of 1980,  
as amended (42 U.S.C. § 9606(a))

ADMINISTRATIVE ORDER  
FOR REMEDIAL DESIGN AND REMEDIAL ACTION

## TABLE OF CONTENTS

I.	INTRODUCTION AND JURISDICTION.....	3
II.	FINDINGS OF FACT.....	3
III.	CONCLUSIONS OF LAW AND DETERMINATIONS.....	7
IV.	NOTICE TO THE STATE.....	8
V.	ORDER.....	8
VI.	DEFINITIONS.....	8
VII.	NOTICE OF INTENT TO COMPLY.....	12
VIII.	PARTIES BOUND.....	12
IX.	WORK TO BE PERFORMED.....	14
X.	ADDITIONAL WORK.....	21
XI.	EPA PERIODIC REVIEW.....	22
XII.	ENDANGERMENT AND EMERGENCY RESPONSE.....	22
XIII.	COMPLIANCE WITH APPLICABLE LAWS.....	23
XIV.	REMEDIAL PROJECT MANAGER.....	24
XV.	SITE ACCESS AND DATA/DOCUMENT AVAILABILITY.....	25
XVI.	RECORD PRESERVATION.....	30
XVII.	DELAY IN PERFORMANCE.....	31
XVIII.	ASSURANCE OF ABILITY TO COMPLETE WORK.....	32
XIX.	UNITED STATES NOT LIABLE.....	33
XX.	ENFORCEMENT AND RESERVATIONS.....	34
XXI.	EFFECTIVE DATE AND COMPUTATION OF TIME.....	36
XXII.	OPPORTUNITY TO CONFER.....	36

1 I. INTRODUCTION AND JURISDICTION

2 This Administrative Order ("Order") is issued by the United  
3 States Environmental Protection Agency ("EPA") under the  
4 authority vested in the President of the United States by Section  
5 106(a) of the Comprehensive Environmental Response, Compensation,  
6 and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C.  
7 § 9606(a). This authority was delegated to the Administrator of  
8 EPA on January 23, 1987, by Executive Order 12580 (52 Fed. Reg.  
9 2926, January 29, 1987), and was further delegated to EPA  
10 Regional Administrators on September 13, 1987 by EPA Delegation  
11 No. 14-14-B. This Order is issued by EPA to Jasco Chemical  
12 Company, Harry M. Anthony, and Carol Jean Anthony (hereafter  
13 referred to collectively as "Jasco" or "Respondent") to require  
14 Jasco to perform the remedial design and remedial action as  
15 described in the Record of Decision for the Jasco Chemical  
16 Company Site (the "Jasco Site" or the "Site") dated September 30,  
17 1992.

18  
19 II. FINDINGS OF FACT

20 A. SITE DESCRIPTION

- 21 1. The Jasco Site consists of the property located at 1710  
22 Villa Street in the City of Mountain View. The site  
23 consists of 2.05 acres currently owned by Harry M.  
24 Anthony, Carol Jean Anthony, and Lois M. Conley.
- 25 2. The Site is located in a residential setting, dominated  
26 by single family homes to the south, and the Villa  
27 Mariposa apartment complex to the east. Single and  
28 multi-family dwellings located along Higdon Avenue

1 border the Jasco Site to the west. Villa Street is  
2 located south of the Site and the Southern Pacific  
3 Railroad main line right-of-way borders the Site to the  
4 north.

5 3. Jasco's production process involves repackaging of bulk  
6 chemicals into small containers and blending of  
7 chemicals to produce proprietary products such as  
8 degreasers and paint thinners. Bulk solvents are  
9 received from tankers and are stored in eight  
10 underground tanks. Filling of the tanks is done by  
11 gravity. Powdered solids are received in 55-lb. bags  
12 and other solvents are received in 55 gallon drums. A  
13 preliminary groundwater investigation in June 1984  
14 revealed the presence of chemicals in the soil and  
15 groundwater of the same type as those used and stored  
16 at the Jasco facility.

17 4. Waste disposal, discharge, or spillage of solvents in  
18 the vicinity of the underground storage tanks, the  
19 drainage swale area, the site of the removed diesel  
20 tank, and beneath the production facility resulted in  
21 Site soil and groundwater contamination by 1,1,1  
22 trichloroethane, acetone, benzene, 1,1 dichloroethane,  
23 1,1 dichloroethene, 1,2 dichloroethane, methylene  
24 chloride, pentachlorophenol, tetrachloroethene, toluene,  
25 petroleum hydrocarbons, vinyl chloride, xylenes, carbon  
26 tetrachloride, chloroform, ethyl benzene, methyl ethyl  
27 ketone, and toluene.  
28

1 B. SITE CONTAMINATION

- 2 1. The primary contaminants of concern for groundwater  
3 include the chemicals identified in Section II(A)(4)  
4 above. Methylene chloride and dichloroethane are  
5 possible carcinogens. The primary contaminants of  
6 concern for soil include acetone, benzene, 1,1-  
7 dichloroethane, and methylene chloride. Sixteen primary  
8 contaminants of concern detected in soil and  
9 groundwater at the Site were determined in the Risk  
10 Assessment conducted by EPA to be present at levels  
11 that exceed health based standards.
- 12 2. The excess lifetime cancer risk presented by use of on-  
13 site contaminated groundwater for drinking water is  $4 \times$   
14  $10^{-4}$ .

15  
16 C. REGULATORY AND ENFORCEMENT HISTORY

- 17 1. On August 3, 1987, the Regional Water Quality Control  
18 Board issued Cleanup and Abatement Order No. 87-094.  
19 The Order required Jasco to conduct a remedial  
20 investigation and to submit certain technical reports  
21 according to a specified schedule.
- 22 2. EPA evaluated the Jasco Site according to the Hazard  
23 Ranking System and the Site received a score of 35.36.  
24 The Site was proposed for inclusion on the National  
25 Priorities List on June 24, 1988 (53 FR 23988). The  
26 Site is regulated under the Comprehensive Environmental  
27 Response, Compensation, and Liability Act (CERCLA) of  
28 1980, as amended by the Superfund Amendments and

1 Reauthorization Act (SARA) of 1986.

2 3. On December 21, 1988, EPA issued Administrative Order  
3 No. 89-01 requiring Jasco to complete a Remedial  
4 Investigation/Feasibility Study.

5 4. In Update Number 9 issued on October 4, 1989 (54 FR  
6 41015), the Jasco Site was listed on the National  
7 Priorities List.

8 5. Jasco performed the RI and completed the RI report on  
9 February 2, 1991.

10 6. Jasco performed treatability studies and completed the  
11 treatability studies report on September 30, 1991.

12 7. Jasco performed the FS and completed the FS report on  
13 May 21, 1992.

14 8. EPA's decision for the remedial action to be  
15 implemented at the Site is embodied in a final Record  
16 of Decision (ROD) signed on September 30, 1992, which  
17 the State supported. The ROD is attached to this Order  
18 as Appendix 1 and is incorporated by reference. The  
19 ROD is supported by an Administrative Record that  
20 contains the documents and information upon which EPA  
21 based the selection of the response action.

22 9. The current owners of the Site, Harry M. Anthony, Carol  
23 Jean Anthony, and Lois M. Conley, have been identified  
24 as potentially responsible parties, and EPA has given  
25 them General Notice of potential liability. Jasco  
26 Chemical Company is the current operator of the Site.

1                    III. CONCLUSIONS OF LAW AND DETERMINATIONS

- 2    A.    The Jasco Site is a "facility" as defined in Section 101(9)  
3        of CERCLA, 42 U.S.C. § 9601(9).
- 4    B.    The Respondent is a "person" as defined in Section 101(21)  
5        of CERCLA, 42 U.S.C. § 9601(21).
- 6    C.    The Respondent is a "liable party" as owner and/or operator,  
7        currently or at the time of disposal, as defined in Section  
8        107(a) of CERCLA, 42 U.S.C. § 9607(a), and is subject to  
9        this Order under Section 106(a) of CERCLA, 42 U.S.C.  
10       § 9606(a).
- 11   D.    The substances listed in Section II(A)(4) are found at the  
12        Site and are "hazardous substances" as defined in Section  
13        101(14) of CERCLA, 42 U.S.C. § 9601(14).
- 14   E.    The past disposal and migration of hazardous substances from  
15        the Site constitutes a "release" as defined in Section  
16        101(22) of CERCLA, 42 U.S.C. § 9601(22).
- 17   F.    The potential for continued migration of hazardous  
18        substances from the Site poses a threat of a "release" as  
19        defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).
- 20
- 21   G.    The release and threat of release of one or more hazardous  
22        substances from the Site may present an imminent and  
23        substantial endangerment to the public health or welfare or  
24        the environment.
- 25   H.    The actions required by this Order are necessary to protect  
26        the public health, welfare, and the environment.
- 27
- 28

1 IV. NOTICE TO THE STATE

2 On November 5, 1992, prior to issuing this Order, EPA  
3 notified the State of California Regional Water Quality Control  
4 Board - San Francisco Bay Region of EPA's intent to issue this  
5 Order.

6  
7 V. ORDER

8 Based on the foregoing, the Respondent is hereby ordered to  
9 comply with all of the provisions of this Order, including but  
10 not limited to all appendices to this Order, all documents  
11 incorporated by reference into this Order, and all schedules and  
12 deadlines in this Order, attached to this Order, submitted or  
13 prepared by the Respondent and approved by EPA, or incorporated  
14 by reference into this Order.

15  
16 VI. DEFINITIONS

17 Unless otherwise expressly provided herein, terms used in  
18 this Order which are defined in CERCLA or in regulations  
19 promulgated under CERCLA shall have the meaning assigned to them  
20 in the statute or its implementing regulations. Whenever terms  
21 listed below are used in this Order or in the documents attached  
22 to this Order or incorporated by reference into this Order, the  
23 following definitions shall apply:

24 "CERCLA" shall mean the Comprehensive Environmental  
25 Response, Compensation, and Liability Act of 1980, as amended, 42  
26 U.S.C. §§ 9601 et seq.

27 "Clean-up Standard(s)" shall mean the levels of clean-up,  
28 and associated criteria, to be achieved in the soil and



1 groundwater. These standards and associated criteria shall in-  
2 clude those identified in the ROD and the Scope of Work ("SOW")  
3 and those established by the applicable or relevant and  
4 appropriate requirements ("ARARs") identified in the ROD and in  
5 the Scope of Work (SOW).

6 "Day" shall mean a calendar day unless expressly stated to  
7 be a working day. "Working day" shall mean a day other than a  
8 Saturday, Sunday, or federal holiday. In computing any period of  
9 time under this Order, where the last day would fall on a  
10 Saturday, Sunday, or federal holiday, the period shall run until  
11 the end of the next working day.

12 "EPA" shall mean the United States Environmental Protection  
13 Agency.

14 "SFRWQCB" shall mean the San Francisco Bay Region - State of  
15 California Regional Water Quality Control Board.

16 "National Contingency Plan" or "NCP" shall mean the National  
17 Contingency Plan promulgated pursuant to Section 105 of CERCLA,  
18 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, including any  
19 amendments thereto.

20 "Operation and Maintenance" or "O&M" shall mean all  
21 activities required under the Operation and Maintenance Plan  
22 developed by the Respondent pursuant to this Order and Section IX  
23 (Work To Be Performed) and approved by EPA.

24 "Oversight" shall mean the United States' and/or its  
25 contractors' oversight and review of response actions and all  
26 other actions taken to verify the adequacy of all activities  
27 undertaken and reports submitted by the Respondent as required  
28 under the terms of this Order.

1 "Performance Standards" shall mean those cleanup standards,  
2 standards of control, and other substantive requirements,  
3 criteria or limitations, identified in the Record of Decision,  
4 Section IX (Work To Be Performed) and the SOW, that the Remedial  
5 Action and Work required by this Order must attain and maintain.

6 "Record of Decision" or "ROD" shall mean the EPA Record of  
7 Decision relating to the Site, signed by the Deputy Regional  
8 Administrator on September 30, 1992, and all attachments and any  
9 amendments thereto. (Attached as Appendix 1 to this Order)

10 "Remedial Action" or "RA" shall mean those response  
11 activities to be undertaken by the Respondent to implement the  
12 remedy selected in the ROD and set forth in the SOW attached as  
13 Appendix 2 to this Order, including any additional activities  
14 required under Sections IX, X, XI, XII, and XXI of this Order.

15 "Remedial Design" or "RD" shall mean those response  
16 activities to be undertaken by the Respondent to develop any  
17 final plans and specifications for the Remedial Action pursuant  
18 to the SOW and this Order.

19 "Response Costs" shall mean all costs including  
20 administrative enforcement, removal, investigative and remedial  
21 and other direct and indirect costs and accrued interest thereon  
22 that are incurred by the United States with respect to the Site  
23 pursuant to CERCLA. Response costs include but are not limited  
24 to oversight costs, which are the costs of overseeing the Work,  
25 such as the costs of reviewing or developing plans, reports and  
26 other items pursuant to this Order, and costs associated with  
27 verifying the performance of the Work.

28 "Section" shall mean a portion of this Order identified by a

1 Roman numeral and includes one or more paragraphs.

2 "SOW" shall mean the Scope of Work for implementation of the  
3 Remedial Action and Operation and Maintenance at the Site, as set  
4 forth in Appendix 2 to this Order and any modifications thereto  
5 made under this Order.

6 "Site" or "Jasco Site" shall mean the property located at  
7 1710 Villa Street, Mountain View, California, and the areal  
8 extent of contamination and all suitable areas in close proximity  
9 to the contamination necessary for the implementation of the  
10 response action.

11 "State" shall mean the Regional Water Quality Control  
12 Board - San Francisco Bay Region (SFRWQCB).

13 "United States" shall mean the United States of America.

14 "Waste Material" shall mean (1) any "hazardous substance"  
15 under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any  
16 "pollutant" or "contaminant" under Section 101(33); or (3) any  
17 "hazardous waste" under Section 1004(5) of RCRA, 42 U.S.C.  
18 § 6903(5), and any "solid waste" under Section 1004(27) of RCRA,  
19 42 U.S.C. § 6903(27).

20 "Work" shall mean all response activities Respondent is  
21 required to perform under this Order, including any Remedial  
22 Design, Remedial Action, Operation and Maintenance, and any  
23 activities required to be undertaken pursuant to the SOW,  
24 Sections IX (Work To Be Performed) through XVIII (Assurance of  
25 Ability To Complete Work).

26 "Work Plan" shall mean the work plan developed by the  
27 Respondent and approved by EPA which details the work to be  
28 conducted pursuant to this Order.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28

A. This Order shall apply to and be binding upon the Respondent and its directors, officers, employees, agents, successors, and assigns. The Respondent is responsible for carrying out all activities required by this Order. No change in the ownership, corporate status, or other control of the Respondent shall alter any of the Respondent's responsibilities under this Order.

12

1 stock are transferred to the prospective successor.  
2 The Respondent shall provide a copy of this Order to  
3 each contractor, sub-contractor, laboratory, or  
4 consultant retained to perform any Work under this  
5 Order, within five days after the effective date of  
6 this Order or on the date such services are retained,  
7 whichever date occurs later. The Respondent shall also  
8 provide a copy of this Order to each person  
9 representing it with respect to the Site or the Work  
10 and shall condition all contracts and subcontracts  
11 entered into hereunder upon performance of the Work in  
12 conformity with the terms of this Order. With regard  
13 to the activities undertaken pursuant to this Order,  
14 each contractor and subcontractor shall be deemed to be  
15 related by contract to the Respondent within the  
16 meaning of Section 107(b)(3) of CERCLA, 42 U.S.C.  
17 § 9607(b)(3). Notwithstanding the terms of any  
18 contract, the Respondent is responsible for compliance  
19 with this Order and for ensuring that its contractors,  
20 subcontractors and agents comply with this Order, and  
21 for performing any Work in accordance with this Order.

- 22 C. Within ten (10) days after the effective date of this  
23 Order, the Respondent shall record a copy of this Order  
24 in the Office of the County Recorder of Santa Clara  
25 County. The Respondent shall, within 15 days after the  
26 effective date of this Order, send evidence of such  
27 recording to EPA.  
28

IX. WORK TO BE PERFORMED

A. GENERAL OBLIGATIONS

1. The Respondent shall perform all work required by the Scope of Work ("SOW") attached hereto as Appendix 2 in accordance with the approved Remedial Design/Remedial Action Work Plan referred to in Section IX(B)(1) below, and in accordance with the schedule set forth therein.
2. The Respondent shall cooperate with EPA and the State in providing to the public information regarding the Work. As requested by EPA, the Respondent shall participate in the preparation of such information for distribution to the public and shall participate in public meetings which may be held or sponsored by EPA to explain activities at or relating to the Site.
3. Notwithstanding any approvals which may be granted by the United States or other governmental entities, the Respondent shall assume any and all liability arising from or relating to its contractors, subcontractors, or any other person acting on its behalf in the performance of the remedial action components or its failure to perform fully or complete the remedial action.
4. The Respondent shall appoint a representative ("Project Coordinator") to act on its behalf to execute the remedial action. Within 7 days after the effective date of this Order, the Respondent shall notify EPA in writing of the name and qualifications of the Project Coordinator, including support entities and staff,

1 proposed to be used in carrying out Work under this  
2 Order. If at any time the Respondent proposes to use a  
3 different Project Coordinator, the Respondent shall  
4 notify EPA in advance and shall obtain approval from  
5 EPA before the new Project Coordinator performs any  
6 Work under this Order.

- 7 5. EPA will review the Respondent's selection of a Project  
8 Coordinator according to the terms of this paragraph.

9 If EPA disapproves of the selection of the Project  
10 Coordinator, the Respondent shall submit to EPA within  
11 30 days after receipt of EPA's disapproval of the  
12 Project Coordinator previously selected, a list of  
13 Project Coordinators, including primary support  
14 entities and staff, that would be acceptable to the  
15 Respondent. EPA will thereafter provide notice to the  
16 Respondent of the names of the Project Coordinators  
17 that are acceptable to EPA. The Respondent may then  
18 select any approved Project Coordinator from that list  
19 and shall notify EPA of the name of the Project  
20 Coordinator selected within twenty-one (21) days of  
21 EPA's designation of approved Project Coordinators.

- 22 6. While the Respondent may collect, stage, and secure  
23 materials on-site, it shall not, in performance of  
24 response activities under this Order, treat and  
25 redispense of material at the Site without the presence  
26 and/or approval of EPA or EPA's designated oversight  
27 personnel.

- 28 7. The Respondent shall dispose of any materials taken

1 off-site in compliance with the EPA's Revised  
2 Procedures for Implementing Off-Site Response Actions  
3 ("Off-site Policy", EPA OSWER Directive 9834.11,  
4 November 13, 1987) and any amendments thereto, and the  
5 California Code of Regulations (CCR), Title 22, Chapter  
6 30, Article 6.5, Requirements for Transporters of  
7 Hazardous Waste.

8 8. The Respondent shall submit all reports (daily, weekly,  
9 monthly, etc.) prepared by its contractors and  
10 subcontractors to EPA's designated oversight personnel,  
11 and to the State according to the notice provisions and  
12 schedules set forth in the SOW.

13 9. The Respondent shall sample and monitor groundwater as  
14 specified in the SOW.

15 B. IDENTIFICATION OF AND OBLIGATIONS REGARDING DOCUMENTS TO BE  
16 SUBMITTED TO EPA

17 1. Remedial Design/Remedial Action Work Plan: Within 45  
18 days of the effective date of this Order, the  
19 Respondent shall submit a Remedial Design/Remedial  
20 Action Work Plan to EPA and SFRWQCB. The Remedial  
21 Design/Remedial Action Work Plan shall provide for  
22 design of the remedy set forth in the ROD in accordance  
23 with the SOW and, upon its approval by EPA, shall be  
24 incorporated into and become enforceable under this  
25 Order. In accordance with the attached SOW, the  
26 Respondent shall submit to EPA a Health and Safety Plan  
27 for field design activities which conforms to the  
28 applicable Occupational Safety and Health



1 Administration and EPA requirements including, but not  
2 limited to, 29 C.F.R. §1910.120.

3 a. The Remedial Design/Remedial Action Work Plan  
4 shall include plans and schedules for  
5 implementation of all remedial design tasks  
6 identified in the SOW.

7 b. Upon approval by EPA of the Remedial  
8 Design/Remedial Action Work Plan, the Respondent  
9 shall submit all plans, submittals and other  
10 deliverables required under the Work Plan in  
11 accordance with the schedule set forth therein.

12 c. The Remedial Design/Remedial Action Work Plan  
13 submittal shall include, at a minimum, the  
14 following: (1) preliminary plans, drawings and  
15 sketches; (2) well design construction diagrams;  
16 (3) required specifications in outline form; (4)  
17 preliminary construction schedule; (5) Health and  
18 Safety Plan; (6) Sample Plan protocol; and (7)  
19 outline of construction quality assurance project  
20 plan (CQAPP). The draft CQAPP is due with the  
21 Preliminary Design to be submitted 45 days after  
22 approval of the Final Remedial Design Work Plan.

23 d. The CQAPP, which shall detail the approach to  
24 quality assurance during construction activities  
25 at the site, shall specify a quality assurance  
26 official ("QA Official"), to conduct a quality  
27 assurance program during the construction phase of  
28 the project.

1 e. The Remedial Design/Remedial Action Work Plan  
2 shall contain an outline of the "Final Operation  
3 and Maintenance Plan". The Final Operation and  
4 Maintenance Plan shall provide a description of  
5 planned O&M activities including frequency of  
6 groundwater monitoring, reporting and compliance  
7 reviews. The draft Operation and Maintenance must  
8 be submitted with the Final Design document. The  
9 Final Operation and Maintenance Plan shall be  
10 submitted no later than ten days after completion  
11 of construction. Upon its approval by EPA, the  
12 Final O&M Plan shall be incorporated into and  
13 become enforceable under this Order.

14 f. The Operation and Maintenance Plan shall contain  
15 all items specified in the attached SOW, including  
16 the following: (1) procedures and plans for the  
17 decontamination of equipment and the disposal of  
18 contaminated materials, and (2) a description of  
19 the monitoring plan to be implemented to  
20 demonstrate compliance with ROD cleanup standards  
21 through confirmation sampling.

## 22 2. Quarterly Progress Reports

23 Within 90 days after the issuance of this Order, the  
24 Respondent shall submit to EPA and SFRWQCB the first  
25 quarterly progress report. The progress reports shall  
26 include, but not be limited to, the information  
27 described in the SOW.  
28

3. After review of any deliverable, plan, report, or other item which is required to be submitted for review and approval pursuant to this Order, EPA may: (a) approve the submission; (b) approve the submission with modifications; (c) disapprove the submission and direct Respondent to re-submit the document after incorporating EPA's comments; or (d) disapprove the submission and assume responsibility for performing all or any part of the response action. As used in this Order, the terms "approval by EPA", "EPA approval" or a similar term mean the action described in subparagraphs (a) or (b) of this paragraph.
4. In the event of approval or approval with modifications by EPA, the Respondent shall proceed to take any action required by the deliverable, plan, report, or other item, as approved or modified by EPA.
5. Upon receipt of the notice of disapproval or a request for modification, the Respondent shall, within fourteen (14) days, correct the deficiencies and resubmit the deliverable, plan, report or other item for approval. Notwithstanding the notice of disapproval, the Respondent shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission.
6. If any resubmission of a deliverable is not approved by EPA, the Respondent shall be deemed to be in violation of this Order.

1 C. ADDITIONAL OBLIGATIONS

- 2 1. Neither the Work Plan nor any approvals, permits or  
3 other permission which may be granted by EPA related to  
4 this Order constitute a warranty or representation of  
5 any kind by the United States that the Work Plan will  
6 achieve the standards set forth in the ROD, and in the  
7 SOW, and shall not foreclose the United States from  
8 seeking performance of all terms and conditions of this  
9 Order. Nothing in this Order shall be construed to  
10 relieve the Respondent of its obligations to achieve  
11 all Clean-up Standards and Performance Standards set  
12 forth in the ROD and in the SOW. Following termination  
13 of this Order, if post-termination monitoring indicates  
14 that the groundwater Clean-up Standards are being  
15 exceeded, the Respondent shall recommence treatment of  
16 the groundwater until Clean-up Standards have been  
17 achieved.
- 18 2. The Respondent shall meet all Clean-up Standards and  
19 Performance Standards identified in the ROD and the  
20 SOW.
- 21 3. In the event EPA determines that the Respondent has  
22 failed to implement the Remedial Action or any portions  
23 thereof in a timely or adequate manner, EPA or its  
24 designee may perform such portions of the Remedial  
25 Action as EPA determines may be necessary. If EPA  
26 performs all or a portion or portions of the Remedial  
27 Action because of the Respondent's failure to comply  
28 with its obligations under this Order, the Respondent

1 shall be liable to EPA for the costs of doing such work  
2 pursuant to Section 107(a) of CERCLA, plus civil  
3 penalties as set forth in Section XX.E of this Order.  
4

5 X. ADDITIONAL WORK

- 6 A. In the event that EPA or the Respondent determines that  
7 additional response work is necessary to protect human  
8 health and the environment, to carry out the remedy  
9 described in the ROD or to meet the Performance or  
10 Clean-up Standards described in the ROD, the SOW, or  
11 in Section IX (Work To Be Performed) of this Order, the  
12 Respondent shall implement such additional work.
- 13 B. Unless otherwise stated by EPA, within 30 days of  
14 receipt of notice by EPA that additional work is  
15 necessary pursuant to this Section, the Respondent  
16 shall submit a work plan as specified by EPA. The plan  
17 shall conform to the requirements set forth in Section  
18 IX (Work To Be Performed).
- 19 C. Any additional work determined to be necessary by the  
20 Respondent is subject to approval by EPA.
- 21 D. Any additional work determined to be necessary by the  
22 Respondent and approved by EPA, or determined to be  
23 necessary by EPA to protect human health and the  
24 environment, to carry out the remedy described in the  
25 ROD or to meet the Performance or Clean-up Standards,  
26 shall be completed by the Respondent in accordance with  
27 the standards, specifications, and schedules approved  
28 by EPA.

1 E. If EPA disapproves the plan pursuant to the provisions  
2 of Section IX (Work To Be Performed), within 14 days of  
3 such disapproval, the Respondent, consistent with  
4 Section IX (Work to Be Performed), shall submit a  
5 modified plan.

6 F. The Respondent shall promptly implement the plan as  
7 approved or modified by EPA.  
8

9 XI. EPA PERIODIC REVIEW

10 Under Section 121(c) of CERCLA, 42 U.S.C. § 9621(c), and any  
11 applicable regulations, EPA may review conditions at the Site to  
12 assure that the work performed pursuant to this Order adequately  
13 protects human health and the environment. Until such time as  
14 EPA certifies completion of the work, the Respondent shall  
15 conduct the requisite studies, investigations, or other response  
16 actions as determined necessary by EPA in order to permit EPA to  
17 conduct the review under Section 121(c) of CERCLA. As a result  
18 of any review performed under this paragraph, Respondent may be  
19 required to perform additional work or to modify work previously  
20 performed.  
21

22 XII. ENDANGERMENT AND EMERGENCY RESPONSE  
23

24 A. In the event of any action or occurrence during the  
25 performance of the Work which causes or threatens to  
26 cause a release of a hazardous substance or which may  
27 present an immediate threat to public health or welfare  
28 or the environment, the Respondent shall immediately

1 take all appropriate action to prevent, abate, or  
2 minimize the threat, and shall immediately notify the  
3 State and the EPA Remedial Project Manager ("RPM"). If  
4 EPA's RPM is not available, the Respondent shall notify  
5 the EPA Emergency Response Section, Region 9. The  
6 Respondent shall take such action in consultation with  
7 EPA's RPM (or the EPA Emergency Response Section,  
8 Region 9, if the RPM is not available) and in  
9 accordance with all applicable provisions of this  
10 Order, including, but not limited to, the Health and  
11 Safety Plan and the Contingency Plan. In the event  
12 that the Respondent fails to take the appropriate  
13 response action as required by this Section, and EPA  
14 takes that action instead, the Respondent shall be  
15 liable to EPA for all costs of the response action  
16 pursuant to Section 107 of CERCLA.

- 17 B. Nothing in the preceding paragraph shall be deemed to  
18 limit any authority of the United States or the State  
19 to take, direct, or order all appropriate action to  
20 protect human health and the environment or to prevent,  
21 abate, or minimize an actual or threatened release of  
22 hazardous substances on, at, or from the Site.

23  
24 XIII. COMPLIANCE WITH APPLICABLE LAWS

- 25 A. Except as provided in Section 121(e) of CERCLA and the  
26 NCP, no permit shall be required for any portion of the  
27 work conducted entirely on-Site; however, the  
28 Respondent shall meet all substantive requirements of

1 ARARs as set forth in the ROD. Where any portion of  
2 the Work requires a Federal or State permit or  
3 approval, the Respondent shall submit timely  
4 applications and take all other actions necessary to  
5 obtain and to comply with all such permits or  
6 approvals.

7 B. All activities conducted by the Respondent pursuant to  
8 this Order shall be performed in accordance with the  
9 requirements of all Federal and State laws and  
10 regulations. EPA has determined that the activities  
11 contemplated by this Order are consistent with the  
12 National Contingency Plan (NCP).

13 C. This Order is not, and shall not be construed to be, a  
14 permit issued pursuant to any Federal or State statute  
15 or regulation.

16  
17 XIV. EPA REMEDIAL PROJECT MANAGER; STATE PROJECT MANAGERS

18 A. All communications, whether written or oral, from the  
19 Respondent to EPA shall be directed to EPA's Remedial  
20 Project Manager (RPM). The Respondent shall submit to  
21 EPA two copies, and one copy to the SFRWQCB, of all  
22 deliverables, including documents, plans, reports, and  
23 other correspondence, which are prepared or developed  
24 pursuant to this Order, and shall deliver these  
25 documents by U.S. Mail, overnight mail, or hand  
26 delivery to EPA and to the SFRWQCB.



1 EPA's Remedial Project Manager is:

2 Rose Marie Caraway  
3 EPA, Region IX  
4 75 Hawthorne Street, H-6-3  
5 San Francisco, CA 94105

- 6 B. EPA has the unreviewable right to change its Remedial  
7 Project Manager. If EPA changes its Remedial Project  
8 Manager, EPA will inform the Respondent in writing of  
9 the name, address, and telephone number of the new  
10 Remedial Project Manager.
- 11 C. EPA's RPM shall have the authority lawfully vested in a  
12 Remedial Project Manager (RPM) and On-Scene Coordinator  
13 (OSC) by the National Contingency Plan, 40 C.F.R. Part  
14 300. EPA's RPM shall have authority, consistent with  
15 the National Contingency Plan, to halt any work  
16 required by this Order, and to take any necessary  
17 response action.
- 18 D. All communications, whether written or oral, from the  
19 Respondent to the State shall be directed to State  
20 project managers as follows:

21 SFRWQCB:

22 Stephen Hill  
23 Project Coordinator  
24 Regional Water Quality Control Board  
25 San Francisco Bay Region  
26 1800 Harrison Street, Suite 700  
27 Oakland, CA. 94612

28 XV. SITE ACCESS AND DATA/DOCUMENT AVAILABILITY

- 29 A. To the extent that the Site or other areas where work  
30 is to be performed under this Order are presently  
31 owned or controlled by parties other than those bound

1 by this Order, and to the extent that access to or  
2 easements over property is required for the proper and  
3 complete performance of this Order, the Respondent  
4 shall cooperate and work in conjunction with the  
5 present owners or those persons who have control over  
6 the property, including lessees, to obtain access  
7 agreements within sixty (60) days of the effective date  
8 of this Order. Site access agreements shall provide  
9 access to EPA, its contractors and representatives, and  
10 to the Respondent and its contractor(s) and authorized  
11 representatives, and such agreements shall specify that  
12 the Respondent is not EPA's representative with respect  
13 to liability associated with Site activities.

14 B. The Respondent shall save and hold harmless the United  
15 States and its officials, agents, employees,  
16 contractors, subcontractors, and representatives for  
17 and from any and all claims or causes of action or  
18 other costs incurred by the United States including,  
19 but not limited to, attorneys' fees and other expenses  
20 of litigation and settlement, arising from or on  
21 account of acts or omissions of Respondent, its  
22 officers, directors, employees, agents, contractors,  
23 subcontractors, and any persons acting on its behalf or  
24 under its control, in carrying out activities pursuant  
25 to this Order.

26 C. In the event that Site access agreements are not  
27 obtained within the sixty (60) day period, the  
28 Respondent shall notify EPA within sixty five (65) days

1 of the effective date of this Order regarding both the  
2 lack of, and its efforts to obtain, such agreements.  
3 If the Respondent fails to gain access within 60 days,  
4 it shall continue to use its best efforts to obtain  
5 access until access is granted. For purposes of this  
6 paragraph, "best efforts" includes, but is not limited  
7 to, the payment of money as consideration for access.

8 D. The Respondent and its agents and representatives shall  
9 allow EPA and its authorized representatives and  
10 contractors, and the State and its authorized  
11 representatives and contractors, to enter and freely  
12 move about all property at the Site and off-Site areas  
13 subject to or affected by the work under this Order and  
14 where documents required to be prepared or maintained  
15 by this Order are located, for the purposes of in-  
16 specting conditions, activities, the results of  
17 activities, records, operating logs, and contracts  
18 related to the Site or the Respondent and its  
19 representatives and contractors pursuant to this Order;  
20 reviewing the progress of the Respondent in carrying  
21 out the terms of this Order; conducting tests as EPA or  
22 its authorized representatives or contractors deem  
23 necessary; using a camera, sound recording device or  
24 other documentary type equipment; and verifying the  
25 data submitted to EPA by the Respondent. The  
26 Respondent shall allow EPA and its authorized  
27 representatives to enter the Site, to inspect and copy  
28 all records, files, photographs, documents, sampling

1 and monitoring data, and other writings related to work  
2 undertaken in carrying out this Order. Nothing herein  
3 shall be interpreted as limiting or affecting EPA's  
4 right of entry or inspection authority under Federal  
5 law.

6 E. The Respondent may assert a claim of business  
7 confidentiality covering part or all of the information  
8 submitted to EPA pursuant to the terms of this Order  
9 pursuant to 40 C.F.R. § 2.203, provided such claim is  
10 not inconsistent with Section 104(e)(7) of CERCLA, 42  
11 U.S.C. §9604(e)(7) or other provisions of law. This  
12 claim shall be asserted in the manner described by 40  
13 C.F.R. §2.203(b) and substantiated by the Respondent at  
14 the time the claim is made. Information determined to  
15 be confidential by EPA will be given the protection  
16 specified in 40 C.F.R. Part 2. If no such claim  
17 accompanies the information when it is submitted to  
18 EPA, it may be made available to the public by EPA or  
19 the State without further notice to the Respondent.  
20 The Respondent shall not assert confidentiality claims  
21 with respect to any data related to Site conditions,  
22 sampling, or monitoring.

23 F. The Respondent shall maintain for the period during  
24 which this Order is in effect, an index of all records  
25 and documents relating to activities at the Site and to  
26 the implementation of this Order, that the Respondent  
27 claims contain confidential business information. The  
28 index shall contain, for each item, the date, author,

addressee, and subject of the item. Upon written request from EPA, the Respondent shall submit a copy of the index to EPA.

G. Any person obtaining access to the Site pursuant to this provision shall comply with all applicable provisions of the Worker Health and Safety Plan submitted pursuant to the SOW.

H. Notwithstanding any provision of this Order, the United States retains all of its access authorities and rights under CERCLA, RCRA and any other applicable federal statute or authority.

I. The Respondent shall provide to EPA upon request, copies of all documents and information within its possession and/or control and that of its contractors and agents relating to activities at the Site and to the implementation of this Order, including, but not limited to, sampling, analysis, chain-of-custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, and other documents and information related to the Work. The Respondent shall also make available to EPA for purposes of investigation, information gathering, or testimony, its employees, agents, and representatives with knowledge of relevant facts concerning the performance of the Work.

XVI. RECORD PRESERVATION

- A. For a period of ten (10) years following the date upon which EPA provides notice to the Respondent that the Work has been completed, the Respondent shall preserve and retain all records and documents in its possession or control, including the documents in the possession or control of its contractors and agents that relate in any manner to the Site. At the conclusion of this document retention period, the Respondent shall notify the United States at least ninety (90) calendar days prior to the destruction of any such records or documents, and upon request by the United States, the Respondent shall deliver any such records or documents to EPA.
- B. Within 10 days after the effective date of this Order, the Respondent shall submit to EPA a certification, signed by an appropriate corporate officer of the Respondent, that states that to the best of the officer's knowledge and belief, after a thorough investigation of the Respondent's officers, directors, employees, agents, contractors, subcontractors and any person familiar with the information described in the certification, that it has not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information relating to its potential liability with regard to the Site since the date of notification of potential liability by the United States or the State and that it has fully

1 complied with any and all EPA requests for information  
2 pursuant Section 104(e) and 122(e) of CERCLA, 42 U.S.C.  
3 §§9604(e) and 9622(e). The Respondent shall not  
4 dispose of any such documents without prior approval by  
5 EPA. The Respondent shall, upon EPA's request and at  
6 no cost to EPA, deliver the documents or copies of the  
7 documents to EPA.  
8

9 XVII. DELAY IN PERFORMANCE

- 10 A. Any delay in performance of this Order that, in EPA's  
11 judgment, is not justified by the Respondent under the  
12 terms of this Section shall be considered a violation  
13 of this Order. Any delay in performance of this Order  
14 shall not affect the Respondent's obligations to fully  
15 perform all obligations under the terms and conditions  
16 of this Order.
- 17 B. The Respondent shall notify EPA and the State of any  
18 delay or anticipated delay in performing any  
19 requirement of this Order. Such notification shall be  
20 made by telephone to EPA's RPM within forty eight (48)  
21 hours after the Respondent first knows or should know  
22 that a delay might occur. The Respondent shall adopt  
23 all reasonable measures to avoid or minimize any such  
24 delay. Within five (5) business days after notifying  
25 EPA by telephone, the Respondent shall provide written  
26 notification fully describing the nature of the delay,  
27 any justification for delay, any reason why the  
28 Respondent should not be held strictly accountable for

1 failing to comply with any relevant requirements of  
2 this Order, the measures planned and taken to minimize  
3 the delay, and a schedule for implementing the measures  
4 that will be taken to mitigate the effect of the delay.  
5 Increased costs or expenses associated with im-  
6 plementation of the activities called for in this Order  
7 is not a justification for any delay in performance.  
8

9 XVIII. ASSURANCE OF ABILITY TO COMPLETE WORK  
10

- 11 A. The Respondent shall demonstrate its ability to  
12 complete the Work required by this Order and to pay all  
13 claims that arise from the performance of the Work by  
14 obtaining and presenting to EPA within thirty (30) days  
15 after approval of the Work Plan, one of the following:  
16 (1) a performance bond; (2) a letter of credit; (3) a  
17 guarantee by a third party acceptable to EPA; or (4)  
18 internal financial information sufficient to allow EPA  
19 to determine that the Respondent has sufficient assets  
20 available to perform the Work. The Respondent shall  
21 demonstrate financial assurance in an amount no less  
22 than the estimate of cost for the Remedial Design and  
23 Remedial Action. If the Respondent seeks to  
24 demonstrate its ability to complete the Remedial Action  
25 by means of internal financial information, or by  
26 guarantee of a third party, it shall re-submit such  
27 information annually, on the anniversary of the  
28 effective date of this Order. If EPA determines that



1 such financial information is inadequate, the  
2 Respondent shall, within thirty (30) days after receipt  
3 of EPA's notice of determination, obtain and present to  
4 EPA for approval one of the other three forms of  
5 financial assurance listed above.  
6

7 B. At least seven (7) days prior to commencing any work at  
8 the Site pursuant to this Order, the Respondent shall  
9 submit to EPA a certification that the Respondent or  
10 its contractors and subcontractors have adequate  
11 insurance coverage or have indemnification for  
12 liabilities for injuries or damages to persons or  
13 property which may result from the activities to be  
14 conducted by or on behalf of the Respondent pursuant to  
15 this Order, and shall provide evidence of same,  
16 including copies of all insurance policies. The  
17 Respondent shall ensure that such insurance or  
18 indemnification is maintained for the duration of  
19 performance of the Work required by this Order.  
20

21 XIX. UNITED STATES NOT LIABLE  
22

23 The United States, by issuance of this Order, assumes no  
24 liability for any injuries or damages to persons or property  
25 resulting from acts or omissions by the Respondent, or its  
26 directors, officers, employees, agents, representatives,  
27 successors, assigns, contractors, or consultants in carrying out  
28 any action or activity pursuant to this Order. Neither EPA nor

1 the United States may be deemed to be a party to any contract  
2 entered into by the Respondent or its directors, officers,  
3 employees, agents, successors, assigns, contractors, or  
4 consultants in carrying out any action or activity pursuant to  
5 this Order.

6  
7  
8 XX. ENFORCEMENT AND RESERVATIONS

- 9 A. EPA reserves the right to bring an action against the  
10 Respondent under Section 107 of CERCLA, 42 U.S.C.  
11 \$9607, for recovery of any response costs incurred by  
12 the United States related to this Order and not  
13 reimbursed by the Respondent. This reservation shall  
14 include, but not be limited to, past costs not  
15 recovered by EPA, direct costs, indirect costs, the  
16 costs of oversight, the costs of compiling the cost  
17 documentation to support oversight cost demand, as well  
18 as accrued interest as provided in Section 107(a) of  
19 CERCLA.
- 20 B. Notwithstanding any other provision of this Order, at  
21 any time during the response action, EPA may perform  
22 its own studies, complete the response action (or any  
23 portion of the response action) and seek reimbursement  
24 from the Respondent for its costs, or seek any other  
25 appropriate relief.
- 26 C. Nothing in this Order shall preclude EPA from taking  
27 any additional enforcement actions, including  
28 modification of this Order to include performance of

1 all remedial design and remedial action as set forth in  
2 the ROD, or issuance of additional Orders, and/or  
3 additional remedial or removal actions as EPA may deem  
4 necessary, or from requiring the Respondent in the  
5 future to perform additional activities pursuant to  
6 CERCLA, 42 U.S.C. §9606(a), et seq., or any other  
7 applicable law. The Respondent shall be liable under  
8 CERCLA Section 107(a), 42 U.S.C. §9607(a), for the  
9 costs of any such additional actions.

10 D. Notwithstanding any provision of this Order, the United  
11 States hereby retains all of its information gathering,  
12 inspection and enforcement authorities and rights under  
13 CERCLA, RCRA and any other applicable statutes or  
14 regulations.

15 E. The Respondent shall be subject to civil penalties  
16 under Section 106(b) of CERCLA, 42 U.S.C. §9606(b), of  
17 not more than \$25,000 for each day in which Respondent  
18 willfully violates this Order, or fails or refuses to  
19 comply with this Order without sufficient cause. In  
20 addition, failure to properly provide response action  
21 under this Order, or any portion hereof, without  
22 sufficient cause, may result in liability under Section  
23 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3), for  
24 punitive damages in an amount at least equal to, and  
25 not more than three times the amount of, any costs  
26 incurred by the Fund as a result of such failure to  
27 take proper action.  
28

1 F. Nothing in this Order shall constitute or be construed  
2 as a release from any claim, cause of action or demand  
3 in law or equity against any person for any liability  
4 it may have arising out of or relating in any way to  
5 the Site.

6 G. If a court issues an order that invalidates any  
7 provision of this Order or finds that the Respondent  
8 has sufficient cause not to comply with one or more  
9 provisions of this Order, the Respondent shall remain  
10 bound to comply with all provisions of this Order not  
11 invalidated by the court's order.

12  
13 XXI. EFFECTIVE DATE AND COMPUTATION OF TIME  
14

15 This Order shall be effective when the Order is signed by  
16 the Director of the Hazardous Waste Management Division. All  
17 times for performance of ordered activities shall be computed  
18 from this effective date.

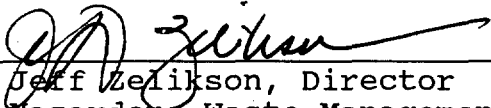
19  
20 XXII. OPPORTUNITY TO CONFER  
21

22 A. The Respondent may confer with EPA's Deputy Director  
23 for Superfund, Hazardous Waste Management Division, or  
24 whomever the Deputy Director for Superfund may  
25 designate, to discuss this Order. If Respondent  
26 desires such a conference, a request must be made  
27 within seven (7) days of receipt of this Order, to Rose  
28 Marie Caraway, at (415) 744-2235.

1 B. The purpose and scope of the conference shall be  
2 limited to issues involving the implementation of the  
3 response actions required by this Order and the extent  
4 to which the Respondent intends to comply with this  
5 Order. This conference is not an evidentiary hearing,  
6 and does not constitute a proceeding to challenge this  
7 Order. It does not give the Respondent a right to seek  
8 review of this Order, or to seek resolution of  
9 potential liability, and no official stenographic  
10 record of the conference will be made. At any  
11 conference held pursuant to Respondent's request, the  
12 Respondent may appear in person or by an attorney or  
13 other representative.

14 So Ordered, this 3<sup>rd</sup> day of December, 1992.

15 BY: \_\_\_\_\_  
16

  
17 Jeff Zelickson, Director  
Hazardous Waste Management Division  
U.S. Environmental Protection Agency, Region IX  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

1  
2  
3  
4 SCOPE OF WORK  
5 FOR  
6 THE REMEDIAL DESIGN AND REMEDIAL ACTION  
7 AT THE  
8 JASCO CHEMICAL COMPANY SUPERFUND SITE  
9 SANTA CLARA COUNTY, CALIFORNIA  
10  
11  
12

13 I. PURPOSE  
14

15 The purpose of this Scope of Work (SOW) for the Jasco Site is to  
16 fully implement the remedial actions selected in the Record of  
17 Decision (ROD) for the site which was signed by the EPA Deputy  
18 Regional Administrator on September 30, 1992. Jasco shall comply  
19 with all requirements of the EPA Superfund Remedial Design and  
20 Remedial Action Guidance, the Final Record of Decision, the  
21 Remedial Design/Remedial Action (RD/RA) Work Plan (to be produced  
22 as a submittal under this SOW), any additional guidance provided  
23 by EPA, and this SOW in designing, implementing, and submitting  
24 deliverables for the Remedial Action at the Jasco Site and in  
25 implementing the remedial actions selected in the ROD.  
26  
27  
28

## **II. Description of the Remedial Action**

The Respondent shall design and implement the Remedial Action selected in the ROD to meet the performance standards and specifications set forth in the ROD and this SOW. Performance standards shall include groundwater and soil cleanup standards, and other substantive requirements, criteria and limitations including all Applicable or Relevant and Appropriate Requirements (ARARS) set forth in the ROD and this SOW. The performance standards and specifications of the major components of the remedial action for the Jasco Site which shall be designed and implemented by the Respondent consist of the following:

### **1. Site Security**

The Respondent shall fence or otherwise secure all site remedy components (soil and groundwater treatment system) to prevent access to these components by the public and to prevent vandalism during the soil treatment process and after the facility is razed. Warning signs shall be posted along the existing fence. The signs shall provide a telephone number to call for further information. The new fence or security system shall be completed within 30 days after the current fencing system is demolished.

1           **2.   Restrictive Easements**

2

3           The Respondent shall duly execute and record a

4           restrictive easement (deed and lease restriction)

5           prohibiting the use of A zone groundwater underlying

6           the Jasco Site as a source of drinking water. Such

7           Restrictions shall be contained in each and all deeds,

8           leases, and conveyances of any type of any portion of

9           the Property. Such Restrictions shall include all of

10          the following language: (1) No wells shall be drilled

11          on the Property without the express prior written

12          approval of EPA; (2) Any person acquiring ownership or

13          possession of the Property, or any portion thereof,

14          shall provide, within 30 days of any such purchase or

15          tenancy, written notice of the purchase or tenancy to

16          EPA at 75 Hawthorne Street, H-6-3, San Francisco, CA

17          94105. (3) the restrictions shall remain in force

18          until all groundwater cleanup standards have been

19          achieved, as determined by EPA; (4) the restrictive

20          easement shall be recorded in the Official Records of

21          the County of Santa Clara, State of California no later

22          than 45 days after receipt of this Unilateral Order and

23          SOW; and (5) the form and content of the restrictive

24          easement shall be subject to the prior written approval

25          of EPA.

26

27

28



1           **3. Construction, Installation and Operation of a**  
2           **Groundwater Extraction and Treatment System**

3  
4           The Respondent shall design, install, operate and  
5           maintain a groundwater extraction/treatment system to  
6           restore groundwater to meet all performance standards  
7           set forth in this ROD and this SOW. The Respondent  
8           shall operate the groundwater extraction system until  
9           all the groundwater performance standards are met  
10          throughout the contaminated plume. The groundwater  
11          performance standards are the cleanup standards listed  
12          in Table 4.1 of the ROD. The Respondent shall operate  
13          the groundwater extraction system in a manner such that  
14          hydraulic control (pumping of water to control the flow  
15          of the plume) is maintained to prohibit further  
16          vertical and horizontal migration.

17  
18          The Respondent shall **design** the extraction wells to be  
19          capable of pumping sufficient quantities of groundwater  
20          to capture and extract the entire contaminated plume.

21  
22          The Respondent shall **install and operate** an extraction  
23          system which shall be a network of wells designed to  
24          completely capture and remove contaminated groundwater  
25          within the areal and vertical extent of the  
26          contaminated plume. The groundwater performance  
27          standards listed in **Table 4.1** of the ROD, shall be  
28          attained and never be exceeded outside the entire

1 plume. The final number of wells, placement and  
2 extraction rates shall be determined solely at the  
3 discretion of EPA.  
4

5 The Respondent shall install additional extraction  
6 wells in a quantity and at locations to be determined  
7 by EPA, to improve the performance of the groundwater  
8 extraction and treatment system.  
9

10 The Respondent shall pump extracted groundwater to the  
11 groundwater treatment system for removal of chemicals  
12 to the discharge cleanup standards (Publicly Owned  
13 Treatment Works (POTW) permit levels) prior to  
14 discharge to the Mountain View POTW. The POTW permit  
15 provisions allow discharge as long as groundwater  
16 contaminant concentration levels do not exceed 1 part  
17 per million (1 ppm) total toxic organic compounds  
18 (TTO). TTO is defined by 40 CFR 413.02 and the TTO  
19 must not exceed 750 parts per billion (ppb) (or .750  
20 ppm) for any one constituent. The extraction system  
21 shall be operated until the aquifer groundwater cleanup  
22 standards are met. The aquifer groundwater cleanup  
23 standards are shown in **Table 4.1** of the ROD.  
24

25 The Respondent shall fully determine the groundwater  
26 treatment process during the design phase but the  
27 treatment process shall include the following steps:  
28 (1) groundwater shall be pumped from the appropriate

1 extraction wells; (2) contaminated groundwater shall  
2 pass through the liquid phase carbon adsorption bed;  
3 (3) treated groundwater shall be pumped to an  
4 appropriate location for discharge to the POTW. The  
5 process steps listed above can be modified based on  
6 information collected during the design phase of the  
7 project.

8  
9 The Respondent shall evaluate the need for including a  
10 polishing step to prevent water-borne microorganisms  
11 from obstructing the system, and shall submit its  
12 recommendation to EPA. EPA shall determine, at its  
13 sole discretion, whether a polishing step shall be  
14 required.

15  
16 The Respondent may request EPA to allow termination of  
17 the extraction system after a demonstration that the  
18 groundwater performance standards have been met  
19 throughout the entire contaminated plume. However,  
20 operation of the extraction system may be terminated  
21 only at the written direction of EPA. The  
22 demonstration shall consist of at least three years of  
23 consecutive quarterly monitoring during which none of  
24 the contaminants exceeds any performance standard in  
25 any of the wells in the monitoring network. Monitoring  
26 shall be conducted pursuant to Attachment 1 of this  
27 SOW, and all other parameters added during the design.

1 The system's performance shall be evaluated on an  
2 annual basis in the annual groundwater monitoring  
3 report, and EPA may require adjustments to the system  
4 as warranted by the performance data collected during  
5 operation. Examples of adjustments which may be  
6 required by EPA are additional groundwater extraction  
7 wells and/or changes in pumping rates.

#### 8 9 **CONTINGENT REACTIVATION OF GROUNDWATER TREATMENT SYSTEM**

10 The Respondent shall reactivate the groundwater  
11 extraction treatment system upon written notice from  
12 EPA to do so, if groundwater monitoring indicates that  
13 the concentration of contaminants have increased above  
14 the aquifer cleanup standards after the groundwater  
15 restoration has been completed. Indication of an  
16 exceedance of a groundwater performance standard may be  
17 based on a single monitoring event in any well.

#### 18 19 **4. Sampling of site soils**

20  
21 The Respondent shall sample soils located beneath the  
22 production facility, the drum storage area, and the  
23 underground storage tank area to ensure that the  
24 concentration of contaminants in these areas do not  
25 exceed soil cleanup standards. This sampling shall  
26 commence no later June 1996 or within six months after  
27 razing of the building, whichever occurs first. If  
28 contamination exceeds the cleanup standards, set forth

1 in the ROD, the soil shall be treated as set forth in  
2 paragraph 6 below.

3  
4 Design submittals shall include a Sampling and Analysis  
5 Plan/Quality Assurance Project Plan (SAP/QAPP) which  
6 shall include confirmation sampling of site soils after  
7 the treatment process is completed to ensure that  
8 concentrations of contaminants no longer exceed soil  
9 cleanup standards.

10  
11 **5. Excavation of contaminated soils**

12  
13 The Respondent shall excavate soils in the drainage  
14 swale area in a manner such that the integrity of the  
15 commuter railroad line is not affected. Respondent  
16 shall recommend the depth and aerial extent of this  
17 excavation in the Remedial Design Report for EPA  
18 approval. The Respondent shall allow Southern Pacific  
19 Railroad an opportunity to evaluate any remedial design  
20 specifications that may impact the railroad tracks.

21 The Respondent shall evaluate soil excavation  
22 methodologies that minimizes volatilization of  
23 chemicals from contaminated soils. Based on this  
24 evaluation, Respondent shall design a method of  
25 excavating soils that minimizes volatilization and  
26 shall submit its recommendation to EPA.

1           **6.    Treatment of contaminated soils**

2

3           The Respondent shall treat all site soils containing

4           chemical concentrations greater than the cleanup

5           standards shown on Table 4.1 of the ROD with the

6           enhanced biotreatment method that is described in the

7           Feasibility Study. Under this method contaminated soil

8           shall be excavated and placed in an enclosed container

9           on the site. The soil shall be mixed with nutrients to

10          encourage digestion of contaminants by microorganisms.

11          The container shall have an air distribution system

12          along the bottom. Air drawn through this system will

13          provide oxygen to the microorganisms and also extract

14          the volatile organic compounds. The air stream shall

15          then pass through an activated carbon adsorption

16          system. The carbon will be taken off-site and disposed

17          of at a facility with a permit to accept hazardous

18          waste. The Respondent shall also evaluate the

19          necessity for implementation of pilot scale

20          treatability studies to develop the process steps for

21          the anerobic/aerobic treatment train, and provide its

22          recommendations to EPA. EPA shall determine in its

23          sole discretion whether treatability studies are

24          necessary. Any placement of treated soils onto Jasco

25          site property shall be in accordance with the Land

26          Disposal Restrictions as set forth in the ROD.

27

28

1           **7.   Off-site disposal of site soils**

2  
3           The Respondent shall provide off-site disposal of site  
4           soils, (in a manner that complies with all applicable  
5           Federal and State laws), if residual soil  
6           concentrations greater than the soil cleanup standards  
7           set forth in Table 4.1 of the ROD remain after  
8           biological treatment has been completed.

9  
10           **8.   Installation and Operation of Monitoring Program for**  
11           **Remedial Action**

12  
13           The Respondent shall install and operate monitoring  
14           programs approved by EPA to evaluate and ensure that  
15           construction and implementation of the Remedial Action  
16           complies with approved plans, design documents and  
17           performance standards. The Respondent shall submit  
18           monitoring reports as part of the Remedial Design Work  
19           Plan, which shall address the specific components of  
20           the remedial action listed below. The Respondent shall  
21           analyze for chemicals approved by EPA during design or  
22           as described in this SOW.

23  
24           **A.   Groundwater Monitoring**

25           The Respondent shall implement the groundwater  
26           monitoring program as described in the Sampling and  
27           Analysis Plan, this SOW, and as modified by EPA. The  
28           groundwater monitoring program shall be reviewed

1 annually and modified if necessary to detect changes in  
2 the chemical concentration of the groundwater at the  
3 Site. Groundwater monitoring shall include collection  
4 and field and laboratory analysis of samples from all  
5 the monitoring and extraction wells. Each well shall  
6 be sampled quarterly. The frequency of monitoring  
7 shall be decreased from quarterly to triannually two  
8 years after all Site soils have been remediated as  
9 shown by soil confirmation sampling. The frequency of  
10 monitoring shall be decreased to biannually once  
11 groundwater cleanup standards have been achieved in all  
12 Site wells and remained below cleanup standards for 3  
13 consecutive sampling periods. EPA shall determine the  
14 need for changes in monitoring requirements during the  
15 five year reviews required by the ROD. If additional  
16 information indicates that the groundwater monitoring  
17 program is inadequate, EPA may require additional  
18 groundwater monitoring wells and laboratory analysis of  
19 additional parameters. Monitoring wells designed for  
20 sampling and laboratory analysis shall include at a  
21 minimum those parameters listed on Attachment 1.

#### 22 23 **B. Air**

24 The Respondent shall ensure that no visible air  
25 emissions occur at or beyond facility fence lines at  
26 all times during the performance of the Remedial  
27 Action. The Respondent shall develop and implement  
28 dust control measures acceptable to EPA. In addition,



1 the Respondent shall evaluate the necessity of  
2 installing real-time aerosol monitoring equipment to  
3 measure dust levels, collecting personal and ambient  
4 air samples, and collecting high-volume air samples,  
5 and make its recommendation to EPA. EPA shall then  
6 determine the necessity of such monitoring and  
7 sampling. The Respondent shall continuously record wind  
8 speed and direction during all soil field work at  
9 locations acceptable to EPA. If air emissions exceed  
10 levels developed in the Contingency Plan/Design Plans,  
11 the Respondent shall take corrective measures as  
12 required by EPA. Respondent shall take all necessary  
13 action to comply with Bay Area Air Quality Management  
14 District Reg. 8, Rule 5 (Storage of Organic Liquids);  
15 Reg. 8, Rule 40 (Aeration of Contaminated Soil and  
16 Removal of Underground Storage Tanks), and Reg. 8, Rule  
17 47 (Air Stripping and Groundwater Aeration).

#### 18 19 **C. Soil**

20 The Respondent shall conduct confirmation sampling to  
21 determine whether or not soil cleanup standards have  
22 been achieved in the biotreatment vessel. Respondent  
23 shall conduct monitoring acceptable to EPA to ensure  
24 the detection of any possible air emissions.

#### 25 26 **D. Extraction/Treatment System Monitoring**

27 The Respondent shall conduct a monitoring program for  
28 the extraction/treatment system as identified in the RD

1 Work Plan or as required by EPA. The treatment system  
2 monitoring program shall be designed to detect any  
3 conditions that may interfere with the proper operation  
4 and function of the system. System monitoring shall  
5 include collection and analysis of effluent samples to  
6 determine the effectiveness of the treatment system and  
7 to prevent breakthrough of the carbon units. Sampling  
8 shall occur on a monthly basis concurrent with the  
9 sampling requirements of the POTW permit. In addition,  
10 the sampling analysis reports required by the City of  
11 Mountain View to satisfy the requirements of the POTW  
12 permit shall be submitted to EPA. Once the remedial  
13 action is determined by EPA to be both operational and  
14 functional, the Respondent shall follow the sampling  
15 procedures and frequencies established in this SOW, the  
16 RD/RA Workplan, and the Operation & Maintenance Plan.

17  
18 **III. SCOPE OF REMEDIAL DESIGN AND REMEDIAL ACTION**

19  
20 The Remedial Design/Remedial Action shall consist of the  
21 following tasks:

22 **Task 1: RD Work Plan**

- 23 A. Field Data Acquisition/Sample Analysis  
24 B. Subsurface explorations and borings  
25 C. Soils and materials testing  
26 D. Treatability Studies  
27 1. pilot-scale report  
28 2. pilot-scale implementation

**Task 2: Remedial Design Phase**

- A. Preliminary Design
- B. Prefinal Design
- C. Final Design (90%/100%/complete)

**Task 3: Remedial Action Work Plan**

Remedial Action/Construction

- A. Preconstruction Meeting
- B. Prefinal Inspection
- C. Final Inspection
- D. Reports
  - 1. Final Construction Report
  - 2. Completion of Remedial Action Report

**Task 4. Operation and Maintenance Plan**

**Task 5: Performance Monitoring**

**Task 1: Remedial Design Work Plan**

The Respondent shall submit a Work Plan to EPA for its review and approval. The Work Plan shall document the overall management strategy for performing the design, construction, operation, maintenance and monitoring of Remedial Actions. The plan shall specify the responsibility and authority of all organizations and key personnel involved with the implementation and shall include a description of qualifications of key personnel directing the Remedial Design, including contractor personnel. The Work Plan shall contain a schedule of Remedial Design activities. The Respondent shall submit a Remedial Design

1 Work Plan in accordance with Section V of this SOW.

2  
3 This remedial design may require pre-design studies to  
4 provide information necessary to fully implement the remedial  
5 design and remedial action. The Respondent shall identify  
6 additional data needs necessary to initiate or complete the  
7 Remedial Design. Additional data collection activities may be  
8 needed to develop the methodology of the anerobic/aerobic  
9 treatment processes that must occur in the bioreactor. The  
10 additional data collection activities will need an approved Field  
11 Sampling Plan, Quality Assurance Project Plan (QAPP), and Health  
12 and Safety Plan (H&S). However, the RI/FS QAPP and H&S Plan may  
13 also be modified to satisfy this requirement.

14  
15 The Respondent shall implement the pre-design work in  
16 accordance with the final RD Work Plan. The results of the  
17 pre-design studies shall be included with the pre-final design.

## 18 19 **Task 2: Remedial Design Phase**

20  
21 The Respondent shall prepare construction plans and  
22 specifications to implement the Remedial Actions at the Site as  
23 described in the ROD and this SOW. Plans and specifications  
24 shall be submitted in accordance with the schedule set forth in  
25 Section V below. Subject to approval by EPA, the Respondent may  
26 submit more than one set of design submittals reflecting  
27 different components of the Remedial Action. All plans and  
28 specifications shall be developed in accordance with EPA's

1 Superfund Remedial Design and Remedial Action Guidance (OSWER  
2 Directive No. 9355.0-4A) and shall demonstrate that the Remedial  
3 Action shall meet all objectives of the ROD and this SOW,  
4 including all Performance Standards. The Respondent shall meet  
5 at least monthly with EPA to discuss design issues. -

6  
7 **A. Preliminary Design**

8 The Respondent shall submit the Preliminary Design when  
9 the design effort is approximately 30 percent complete.

10 The Preliminary Design submittal shall include or  
11 discuss, at a minimum, the following:

- 12 > Preliminary plans, drawings, and sketches,  
13 including design calculations;
- 14 > Results of treatability studies and additional  
15 field sampling;
- 16 > Design assumptions and parameters, including  
17 design restrictions, process performance criteria,  
18 appropriate unit processes for the treatment  
19 train, and expected removal or treatment  
20 efficiencies for both the process and waste  
21 (concentration and volume);
- 22 > Proposed cleanup verification methods, including  
23 compliance with Applicable or Relevant and  
24 Appropriate Requirements (ARARs);
- 25 > Draft Performance Standard Verification Plan;
- 26 > Draft Construction Quality Assurance Plan;
- 27 > Draft QAPP/Draft Health and Safety Plan/Draft  
28 Field Sampling Plan/Draft Contingency Plan

Outline of required specifications;

- > Proposed siting/locations of processes/construction activity;
- > Expected long-term monitoring and operation requirements;
- > Southern Pacific access and permit requirements;
- > Preliminary construction schedule, including contracting strategy.

**B. Prefinal and Final Design**

The Respondent shall submit the Prefinal Design when the design effort is 95% complete and shall submit the Final Design when the design effort is 100% complete. The Prefinal Design shall fully address all comments made to the preceding design submittal. The Final Design shall fully address all comments made to the Prefinal Design and shall include reproducible drawings and specifications suitable for bid advertisement. The Prefinal Design shall serve as the Final Design if EPA has no further comments and issues the notice to proceed.

The Prefinal and Final Design submittals shall include those elements listed for the Preliminary Design, as well as, the following:

- > Final Performance Standard Verification Plan;
- > Final Construction Quality Assurance Plan;

- > Final QAPP/Final H & S Plan/Final Field Sampling Plan/Final Contingency Plan
- > Draft Operation and Maintenance Plan;
- > Capital and Operation and Maintenance Cost Estimate. This cost estimate shall refine the FS cost estimate to reflect the detail presented in the Final Design;
- > Final Project Schedule for the construction and implementation of the Remedial Action which identifies timing for initiation and completion of all critical path tasks. The final project schedule submitted as part of the Final Design shall include specific dates for completion of the project and major milestones.

### **Task 3: Remedial Action Work Plan**

The Respondent shall submit a Remedial Action Work Plan which includes a detailed description of the remediation and construction activities. The RA Work Plan shall include a project schedule for each major activity and submission of deliverables generated during the Remedial Action. The Respondent shall submit a Remedial Action Work Plan in accordance with Section V of this SOW. Respondent shall implement the Remedial Action as detailed in the approved Final Design. The following activities shall also be included in the Remedial Action Work Plan Schedule:

#### **A. Preconstruction inspection and meeting:**

The Respondent shall participate with the EPA in a

preconstruction inspection and meeting to:

- a. Review methods for documenting and reporting inspection data;
- b. Review methods for distributing and storing documents and reports;
- c. Review work area security and safety protocol;
- d. Discuss any appropriate modifications of the construction quality assurance plan to ensure that site-specific considerations are addressed; and
- e. Conduct a Site walk-around to verify that the design criteria, plans, and specifications are understood and to review material and equipment storage locations.

The preconstruction inspection and meeting shall be documented by EPA and minutes shall be transmitted to all parties.

**B. Prefinal inspection:**

Within 10 days after Respondents make a preliminary determination that construction is complete, Respondent shall notify EPA for the purposes of conducting a prefinal inspection. The prefinal inspection shall consist of a walk-through inspection of the entire facility with EPA. The inspection is to determine whether the project is complete and consistent with the contract documents and the Remedial Action. Any



1 outstanding construction items discovered during  
2 the inspection shall be identified and noted.  
3 Additionally, treatment equipment shall be  
4 operationally tested by the Respondent. The  
5 Respondent shall certify in writing to EPA that  
6 the equipment has performed to meet the  
7 specifications required by EPA. Retesting shall  
8 be conducted where deficiencies are revealed. The  
9 prefinal inspection report shall outline the  
10 outstanding construction items, actions required  
11 to resolve items, completion date for these items,  
12 and a proposed date for final inspection.

13 C. Final inspection:

14 Within 10 days after completion of any work  
15 identified in the prefinal inspection report, the  
16 Respondent shall notify the EPA and the State for  
17 the purposes of conducting a final inspection.  
18 The final inspection shall consist of a  
19 walk-through inspection of the facility by EPA and  
20 the Respondent. The prefinal inspection report  
21 shall be used as a checklist with the final  
22 inspection focusing on the outstanding  
23 construction items identified in the prefinal  
24 inspection. Respondent shall confirm to EPA in  
25 writing that outstanding items have been resolved.

26 D. Reports

27 1. Final Construction Report

28 Within 45 days of the final inspection, the

Respondent shall submit a Construction Completion Report. Respondent shall provide to EPA in writing a certification from a registered professional engineer, and from the Respondent's Project Coordinator, that the Remedial Action has been constructed in accordance with the design and specifications approved by EPA. The Construction Completion Report shall include as-built drawings signed and stamped by a professional engineer. The report shall contain the following statement, signed by a corporate officer of the Respondent and by a professional engineer:

"To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

#### **Task 4: Operation and Maintenance**

The Respondent shall prepare an Operation and Maintenance (O&M) Plan to cover both implementation and long term maintenance of the Remedial Actions. An initial Draft O&M Plan shall be submitted as a final Design Document submission. The final O&M

1 Plan shall be submitted to EPA prior to the pre-final  
2 construction inspection, in accordance with the approved  
3 construction schedule. The plan shall be composed of the  
4 following elements:

- 5 1. Description of normal operation and maintenance;
  - 6 a. Description of tasks for operation;
  - 7 b. Description of tasks for maintenance;
  - 8 c. Description of prescribed treatment or operation  
9 conditions; and
  - 10 d. Schedule showing frequency of each O&M task.
- 11 2. Description of potential alteration problems;
  - 12 a. Description and analysis of potential alteration  
13 problems;
  - 14 b. Sources of information regarding problems; and
  - 15 c. Common and/or anticipated remedies.
- 16 3. Description of routine monitoring and laboratory  
17 testing;
  - 18 a. Description of monitoring tasks;
  - 19 b. Description of required data collection,  
20 laboratory tests and their interpretation;
  - 21 c. Required quality assurance, and quality control;
  - 22 d. Schedule of monitoring frequency and procedures  
23 for a petition to EPA to reduce the frequency of  
24 or discontinue monitoring; and
  - 25 e. Description of verification sampling procedures if  
26 Cleanup or Performance Standards are exceeded in  
27 routine monitoring.

4. Description of alternate O&M;
  - a. Should systems fail, alternate procedures to prevent release or threatened releases of hazardous substances, pollutants or contaminants which may endanger public health and the environment or exceed performance standards; and
  - b. Analysis of vulnerability and additional resource requirement should a failure occur.
5. Corrective Action;
  - a. Description of corrective action to be implemented in the event that cleanup or performance standards are exceeded; and
  - b. Schedule for implementing these corrective actions.
6. Safety plan;
  - a. Description of precautions, of necessary equipment, etc., for Site personnel; and
  - b. Safety tasks required in event of systems failure.
7. Description of equipment; and
  - a. Equipment identification;
  - b. Installation of monitoring components;
  - c. Maintenance of Site equipment; and
  - d. Replacement schedule for equipment and installed components.
8. Records and reporting mechanisms required.
  - a. Daily operating logs;
  - b. Laboratory records;
  - c. Records for operating costs;

- d. Mechanism for reporting emergencies;
- e. Personnel and maintenance records; and
- f. Monthly/annual reports to State agencies.

#### **Task 5. Performance Monitoring**

Performance monitoring shall be conducted to ensure that all Performance Standards are met.

##### **A. Performance Standard Verification Plan**

The purpose of the Performance Standard Verification Plan is to provide a mechanism to ensure that both short-term and long-term Performance Standards for the Remedial Action are met. The Draft Performance Standards Verification Plan shall be submitted with the Pre-final Design. Once approved, the Performance Standards Verification Plan shall be implemented on the approved schedule. The Performance Standards Verification Plan shall reference or include:

- 1. Quality Assurance Project Plan
- 2. Health and Safety Plan
- 3. Field Sampling Plan

#### **IV CONTENT OF SUPPORTING PLANS**

The documents listed in this section, the Quality Assurance Project Plan, the Field Sampling Plan, the Health and Safety Plan, the Contingency Plan and the Construction Quality Assurance Plan are documents which must be prepared and submitted as outlined in Section III of this SOW. The following section

describes the required contents of each of these supporting plans.

**A. Quality Assurance Project Plan**

The Respondent shall develop a Site specific Quality Assurance Project Plan (QAPP), covering sample analysis and data handling for samples collected in all phases of future Site work, based upon the RI/FS QAPP, this SOW and guidance provided by EPA. The QAPP shall be consistent with the requirements of the EPA Contract Lab Program (CLP) for laboratories proposed outside the CLP. Revisions to the RI/FS QAPP may also satisfy this requirement. The QAPP shall at a minimum include:

**Project Description**

- \* Facility Location History
- \* Past Data Collection Activity
- \* Project Scope
- \* Sample Network Design
- \* Parameters to be Tested and Frequency
- \* Project Schedule

**Project Organization and Responsibility**

**Quality Assurance Objective for Measurement Data**

- \* Level of Quality Control Effort
- \* Accuracy, Precision and Sensitivity of Analysis
- \* Completeness, Representativeness and Comparability

**Sampling Procedures**

**Sample Custody**

- \* Field Specific Custody Procedures
- \* Laboratory Chain of Custody Procedures

**Calibration Procedures and Frequency**

1           \*     Field Instruments/Equipment  
2           \*     Laboratory Instruments  
3     Analytical Procedures  
4           \*     Non-Contract Laboratory Program Analytical Methods  
5           \*     Field Screening and Analytical Protocol  
6           \*     Laboratory Procedures  
7     Internal Quality Control Checks  
8           \*     Field Measurements  
9           \*     Laboratory Analysis  
10    Data Reduction, Validation, and Reporting  
11           \*     Data Reduction  
12           \*     Data Validation  
13           \*     Data Reporting  
14    Performance and System Audits  
15           \*     Internal Audits of Field Activity  
16           \*     Internal Laboratory Audit  
17           \*     External Field Audit  
18           \*     External Laboratory Audit  
19    Preventive Maintenance  
20           \*     Routine Preventative Maintenance Procedures and  
21                 Schedules  
22           \*     Field Instruments/Equipment  
23           \*     Laboratory Instruments  
24    Specific Routine Procedures to Assess Data Precision,  
25    Accuracy, and Completeness  
26           \*     Field Measurement Data  
27           \*     Laboratory Data  
28    Corrective Action

1           \*     Sample Collection/Field Measurement

2           \*     Laboratory Analysis

3  
4           The Respondent shall attend a pre- QAPP meeting with EPA.  
5     The Respondent shall submit a draft QAPP to EPA for review and  
6     approval. This document should be designed to address all phases  
7     of the project from pre-design to confirmation sampling. The  
8     Respondent may satisfy this requirement by referencing the RI/FS  
9     QAPP when appropriate.

10  
11           **B.     Health and Safety Plan**

12  
13           The Respondent shall develop a health and safety plan which  
14     is designed to protect on-site personnel and area residents from  
15     physical, chemical and all other hazards posed by this remedial  
16     action. The safety plan shall develop the performance levels and  
17     criteria necessary to address the following areas:

18                 Facility Description

19                 Personnel

20                 Levels of protection

21                 Safe work practices and safe guards

22                 Medical survey (locations of hospitals, availability of  
23                 ambulances, etc.)

24                 Personal and environmental air monitoring

25                 Personal protective equipment

26                 Personal hygiene

27                 Decontamination - personal and equipment

28                 Site work zones



1 Contaminant control

2 Contingency and emergency planning

3 Logs, reports and record keeping

4 The safety plan shall follow EPA guidance and all applicable  
5 Occupational Safety and Health Act (29 U.S.C. §651 et seq.)  
6 requirements including those set forth in 29 CFR §1910 and §1926.  
7

8 **Contingency Plan [Stand alone or in H & S]**

9 The Respondent shall submit a Contingency Plan  
10 describing procedures to be used in the event of an accident or  
11 emergency at the site. The draft Contingency Plan shall be  
12 submitted with the prefinal design. The final Contingency Plan  
13 shall be submitted prior to the start of construction, in  
14 accordance with the approved construction schedule. The  
15 Contingency Plan shall include, at a minimum, the following:

- 16 1. Name of the person or entity responsible for  
17 notifying appropriate medical personnel and local  
18 emergency squads in the event of an emergency  
19 incident.
- 20 2. Plan and date(s) for meeting(s) with the local  
21 community, including local, State and Federal  
22 agencies involved in the cleanup, as well as local  
23 emergency squads and hospitals.
- 24 3. First aid medical information.
- 25 4. Air Monitoring Plan.
- 26 5. Spill Prevention, Control, and Countermeasures  
27 (SPCC) Plan (if applicable), as specified in 40  
28 CFR Part 109, describing measures to prevent and

1 contingency plans for potential spills and  
2 discharges from materials handling and  
3 transportation

4 **C. Field Sampling Plan**

5 The Respondent shall develop a field sampling plan (as  
6 described in "Guidance for Conducting Remedial Investigations and  
7 Feasibility Studies Under CERCLA," October 1988). The Field  
8 Sampling Plan should supplement the QAPP and address all sample  
9 collection activities including sampling associated with drum  
10 storage area, tank farm area, and beneath the production  
11 facility.

12  
13 **D. Construction Quality Assurance Plan**

14 The Respondent shall submit a Construction Quality  
15 Assurance Plan (CQAP) which describes the Site specific  
16 components of the quality assurance program which shall ensure  
17 that the completed project meets or exceeds all design criteria,  
18 plans, and specifications. The draft CQAP shall be submitted  
19 with the prefinal design. The final CQAP shall be submitted  
20 prior to the start of construction in accordance with the  
21 approved construction schedule. The CQAP shall contain, at a  
22 minimum, the following elements:

- 23 1. Responsibilities and authorities of all  
24 organizations and key personnel involved in the  
25 design and construction of the Remedial Action.
- 26 2. Qualifications of the designated Quality Assurance  
27 Official to demonstrate he/she possesses the  
28 training and experience necessary to fulfill

his/her identified responsibilities.

3. Protocols for sampling and testing used to monitor construction.
4. Identification of proposed quality assurance sampling activities including the sample size, locations, frequency of testing, acceptance and rejection data sheets, problem identification and corrective measures reports, evaluation reports, acceptance reports, and final documentation. A description of the provisions for final storage of all records consistent with the requirements of the Work Plan shall be included.
5. Reporting requirements for CQA activities shall be described in detail in the CQA plan. This shall include such items as daily summary reports, inspection data sheets, problem identification and corrective measures reports, design acceptance reports, and final documentation. Provisions for the final storage of all records shall be presented in the CQA plan.

#### **E. Groundwater Monitoring Reports**

Section V of this SOW outlines submittal dates for the Groundwater Monitoring Reports. The Groundwater Monitoring Reports shall include the following:

- > Introduction
- > Groundwater Flow and capture Zone Evaluation  
iso-elevation contours and capture zone map  
piezometric surface maps for all affected water

bearing zones, and isocentration maps for key  
contaminants in all affected water bearing zones.

- > Groundwater Analytical results for quarter  
well development data for groundwater sampling  
groundwater quality database from 1984 to present  
for each well
- > POTW summary information
- > Evaluation of Groundwater Extraction System  
Performance (monthly compilation of days in  
operation during month, average flow rate while in  
operation, total gallons pumped during month and  
cumulative flow (gallons))
- > Conclusions and recommendations

#### Schedule for Submission of Quarterly Reports

Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Period	Jan-March	April-June	July-Sept.	Oct.-Dec.
Due Date	March 31	June 30	Sept 30	December 31

## V. SUMMARY OF MAJOR DELIVERABLES/SCHEDULE

A summary of the project schedule and reporting requirements contained in this SOW is presented below:

Submission		Due Date
1.	RD Work Plan	Fourty-five (45) days after Issuance of this Unilateral Administrative Order
2.	Preliminary Design (30%)	Fourty-five (45) days after EPA's approval of Final RD Work Plan
3.	Restrictive Easement	Easement to EPA 25 days after receipt of this Unilateral Administrative. Easement recorded in the Official Records of the County of Santa Clara, within 45 days after receipt of this UAO.
4.	Prefinal Design (95%)	Thirty (30) days after EPA's comments on the Preliminary Design
5.	Final Design (100%)	Thirty (30) days after EPA's comments on the Prefinal Design
6.	RA Work Plan	Thirty (30) days after receipt of EPA's Notice of Authorization to Proceed with RA
7.	Pre-Construction Inspection	Fifteen (15) days after Meeting and Award of RA Contract(s)
8.	Initiate Construction of Remedial Action	Fifteen (15) days after Pre-Construction Inspection and Meeting
9.	Completion of Construction	As approved by EPA in RA construction schedule
10.	Prefinal Inspection	No later than 10 days after completion of construction
11.	Prefinal Inspection Report	Ten (10) days after completion of prefinal inspection
12.	Final Inspection	Ten (10) days after completion of work identified in prefinal inspection report
13.	Final O & M Plan	No later than Prefinal Inspection
14.	Construction Completion Report	Thirty (30) days after final inspection
15.	Completion of Remedial Action Report	Thirty (30) days after final inspection
16.	Groundwater Reports	See Attachment 1
17.	Monthly Progress Reports	Due 15th of each month for proceeding month

## ATTACHMENT 1

### SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the EPA Method 8000 series described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," dated November 1986; and as described in the Jasco Sampling and Analysis Plan.

**Quarter:** First (January - March)

**Sampling dates:** Completed by January 31th

**Sampling Stations:** V-1, V-3, V-4, V-5, V-6, V-7, V-8, V-9, V-10, V-11, V-12, I-1, I-2, I-3

**Type of Sample:** Grab sample

**Type of analysis:** EPA Method 8240 Volatile Organics by GC/MS  
EPA Method 8015/3510/3520  
Total Extractable Petroleum Hydrocarbons  
Total Extractable Petroleum Hydrocarbons/As  
Jasco Paint Thinner)  
EPA Method 8015 Modified Acetone & Alcohols  
EPA Method 8040 Phenols  
EPA Method 8270 Semi-Volatile Organics

**Quarter:** Second (April - June)

**Sampling dates:** Completed by April 30th

**Sampling Stations:** V-1, V-3, V-4, V-5, V-6, V-7, V-8, V-9, V-10, V-11, V-12, I-1, I-2, I-3

**Type of Sample:** Grab sample

**Type of analysis:** EPA Method 8240 Volatile Organics by GC/MS  
EPA Method 8015/3510/3520  
(Total Extractable Petroleum Hydrocarbons/As  
Jasco Paint Thinner)  
Total Extractable Petroleum Hydrocarbons  
EPA Method 8015 Acetone & Alcohols  
EPA Method 8040 Phenols  
EPA Method 8270 Semi-Volatile Organics

**Quarter:** Third (July - September)

**Sampling dates:** Completed by July 31

**Sampling Stations:** V-1, V-3, V-4, V-5, V-6, V-7, V-8, V-9, V-10, V-11, V-12, I-1, I-2, I-3

**Type of Sample:** Grab sample

**Type of analysis:** EPA Method 8240 Volatile Organics by GC/MS  
EPA Method 8015/3510/3520  
(Total Extractable Petroleum Hydrocarbons/As  
Jasco Paint Thinner)  
Total Extractable Petroleum Hydrocarbons

**Quarter:** Fourth (October - December)

**Sampling dates:** Completed by October 31

**Sampling Stations:** V-1, V-3, V-4, V-5, V-6, V-7, V-8, V-9, V-10, V-11, V-12, I-1, I-2, I-3

**Type of Sample:** Grab sample

**Type of analysis:** EPA Method 8240 Volatile Organics by GC/MS  
EPA Method 8015/3510/3520  
(Total Extractable Petroleum Hydrocarbons/As  
Jasco Paint Thinner)  
Total Extractable Petroleum Hydrocarbons

#### TRIANNUAL MONITORING

**Third:** First (January - April )

**Sampling dates:** Completed by February 15th

**Sampling Stations:** V-1, V-3, V-4, V-5, V-6, V-7, V-8, V-9, V-10, V-11, V-12, I-1, I-2, I-3

**Type of Sample:** Grab sample

**Type of analysis:** EPA Method 8240 Volatile Organics by GC/MS  
EPA Method 8015/3510/3520  
(Total Extractable Petroleum Hydrocarbons/As  
Jasco Paint Thinner)  
Total Extractable Petroleum Hydrocarbons  
EPA Method 8015 Acetone & Alcohols  
EPA Method 8040 Phenols  
EPA Method 8270 Semi-Volatile Organics

**Third:**                      **Second (May - August )**

Sampling dates:            Completed by June 15th

Sampling Stations:       V-1, V-3, V-4, V-5, V-6, V-7, V-8, V-9, V-10,  
V-11, V-12, I-1, I-2, I-3

Type of Sample:           Grab sample

Type of analysis:        EPA Method 8240 Volatile Organics by GC/MS  
EPA Method 8015/3510/3520  
(Total Extractable Petroleum Hydrocarbons/As  
Jasco Paint Thinner)  
Total Extractable Petroleum Hydrocarbons

**Third:**                      **Third (September - December)**

Sampling dates:           Completed by October 15th

Sampling Stations:       V-1, V-3, V-4, V-5, V-6, V-7, V-8, V-9, V-10,  
V-11, V-12, I-1, I-2, I-3

Type of Sample:           Grab sample

Type of analysis:        EPA Method 8240 Volatile Organics by GC/MS  
EPA Method 8015/3510/3520  
(Total Extractable Petroleum Hydrocarbons/As  
Jasco Paint Thinner)  
Total Extractable Petroleum Hydrocarbons

**Long Term Phase (Cleanup Standards achieved)**

Frequency:                Twice Per year

Sampling dates:           Completed by March 15th, and September 15th

Sampling Stations:       V-1, V-3, V-4, V-5, V-6, V-7, V-8, V-9, V-10,  
V-11, V-12, I-1, I-2, I-3

Type of Sample:           Grab sample

Type of analysis:        EPA Method 8240 Volatile Organics by GC/MS  
EPA Method 8015/3510/3520  
(Total Extractable Petroleum Hydrocarbons/As  
Jasco Paint Thinner)  
Total Extractable Petroleum Hydrocarbons  
EPA Method 8015 Acetone & Alcohols  
EPA Method 8040 Phenols  
EPA Method 8270 Semi-Volatile Organics



### Post Closure

Frequency: Every other year for ten years  
Sampling dates: Completed by March 15th, and September 15th  
Sampling Stations: V-1, V-3, V-4, V-5, V-6, V-7, V-8, V-9, V-10,  
V-11, V-12, I-1, I-2, I-3  
Type of Sample: Grab sample  
Type of analysis: EPA Method 8240 Volatile Organics by GC/MS  
EPA Method 8015/3510/3520  
(Total Extractable Petroleum Hydrocarbons/As  
Jasco Paint Thinner)  
Total Extractable Petroleum Hydrocarbons  
EPA Method 8015 Acetone & Alcohols  
EPA Method 8040 Phenols  
EPA Method 8270 Semi-Volatile Organics



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street  
San Francisco, Ca. 94105-3901

NOTICE OF DECISION NOT TO USE SPECIAL NOTICE PROCEDURES

CERTIFIED MAIL: RETURN RECEIPT REQUESTED

December 3, 1992

Harry M. Anthony  
Carol Jean Anthony  
Jasco Chemical Company  
1710 Villa Street  
Mountain View, CA 94042

Re: Jasco Superfund Site  
1710 Villa Street, Mountain View, CA

Dear Mr. Anthony:

This letter notifies you that the United States Environmental Protection Agency (EPA) has determined not to use special notice procedures pursuant to Section 122(e) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA), at the above-referenced site regarding the RD/RA.

NOTICE OF POTENTIAL LIABILITY

As indicated in the general notice letter previously sent to you, EPA has evaluated information in connection with the investigation of the site. EPA has information indicating that you may be a potentially responsible party (PRP) as defined at Section 107(a) of the CERCLA, 42 U.S.C. 9607(a), with respect to hazardous substances at this site. Potentially responsible parties under CERCLA include current and former owners and operators of the site as well as persons who arranged for disposal or treatment of hazardous substances sent to the site, or persons who accepted hazardous substances for transport to the site.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street  
San Francisco, Ca. 94105-3901

NOTICE OF DECISION NOT TO USE SPECIAL NOTICE PROCEDURES

CERTIFIED MAIL: RETURN RECEIPT REQUESTED

December 3, 1992

Jasco Chemical Company  
c/o Harry M. Anthony  
1710 Villa Street  
Mountain View, CA 94042

Re: Jasco Superfund Site  
1710 Villa Street, Mountain View, CA

Dear Mr. Anthony:

This letter notifies you that the United States Environmental Protection Agency (EPA) has determined not to use special notice procedures pursuant to Section 122(e) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA), at the above-referenced site regarding the RD/RA.

NOTICE OF POTENTIAL LIABILITY

As indicated in the general notice letter previously sent to you, EPA has evaluated information in connection with the investigation of the site. EPA has information indicating that you may be a potentially responsible party (PRP) as defined at Section 107(a) of the CERCLA, 42 U.S.C. 9607(a), with respect to hazardous substances at this site. Potentially responsible parties under CERCLA include current and former owners and operators of the site as well as persons who arranged for disposal or treatment of hazardous substances sent to the site, or persons who accepted hazardous substances for transport to the site.

DECISION NOT TO USE SPECIAL NOTICE

In this instance EPA has decided that it is inappropriate to invoke the Section 122(e) special notice procedures. EPA believes that using such special notice procedures would not facilitate an agreement between EPA and Jasco and would not expedite the response action at the site. In a letter dated July 15, 1992, to James L. Jaffe, your attorney, EPA confirmed his advice to us that Jasco did not desire to enter into negotiations for the RD/RA at the facility. Therefore, EPA has issued the enclosed Administrative Order which requires Jasco and the other named Respondents to conduct the RD/RA. Pursuant to Section VII of the Order, Jasco must provide EPA written notice of its intent to comply with the Order within seven days of the effective date.

The decision not to use the special notice procedures does not preclude you from entering into discussions with EPA regarding your participation in response activities at the site. This decision simply means that EPA will not use the special notice procedures to govern any future discussions. EPA is prepared to discuss response activities for the Jasco site in the meeting scheduled for December 9th.

EPA CONTACT

If you have any questions pertaining to this matter, please direct them to Rose Marie Caraway, (415) 744-2235. Please direct legal questions to David Silverman, Assistant Regional Counsel, at (415) 744-1377.

Sincerely,

A handwritten signature in dark ink, appearing to read "Jeff Zelikson", with a long horizontal flourish extending to the right.

Jeff Zelikson, Director  
Hazardous Waste Management Division

Attachments